

ABSTRACT

A  $\Delta 5$  fatty acid desaturase gene, a  $\Delta 6$  fatty acid desaturase gene, and a  $\Delta 6$  fatty-acid-chain elongase gene are isolated from a single species of *Marchantiales*. By introducing these genes into higher plants, transformed plants which can produce arachidonic acid and eicosapentaenoic acid (EPA) are obtained.